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**Modern Monetary Policy and Central Bank Governance: A Story of Two
Tales**

By

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Modern Monetary Policy and Central Bank Governance: A Story of Two Tales

Sylvester Eijffinger and Donato Masciandaro

1. Introduction

The objective of this note is to present the evolution of both the economics and the political economy of monetary policy in the last three decades – first the Great Moderation and then the Financial Crisis - as a story of two intertwined tales: on the one side the tale of how to govern money and interest rates in the short run; on the other side the tale of how to design in a longer horizon the monetary architectures. In the tradition the two tales are told separately, where the academic scholars preferred to focus essentially on the first perspective while only the central bankers and partially the policymakers were also sensible to the engineering of the monetary settings. The big innovation in the modern monetary policy was the progressive merger of the analysis of the macroeconomic effects of the public choices in the monetary games played day by day (monetary policy) with the study of the structural features that characterized both the monetary players - governments and central bankers - as well as the rules and institutions of the monetary games that shape goals and incentives of the players (central bankers and other economic agents).

The note tells the progressive merger in a pedagogic way, dedicating the first part to monetary policy and the second one to central banking. This introduction presents the overall story of the two tails in a systematic and integrated way. However, we do not discuss new issues, such as central banking, financial regulation and supervision and the trade-off between monetary and financial stability (for these issues after the Financial Crisis, see our handbook: Eijffinger and Masciandaro, 2011; on the relationship between monetary and supervisory policies before the Financial Crisis, see: Goodhart and Schoenmaker, 1995).

2. Modern Monetary Policy and Central Bank Governance

Up to thirty years ago economic theory did not attribute importance to the concept of central bank governance. The institutional arrangements became important when the economic theory started to stress its role in determining the macroeconomic performances, i.e. during the New Classical Revolution. Then the role of the central bank design and governance was confirmed in the New Keynesian analysis of the monetary policy.

The theoretical bottom line can be summarized as follows: the policymakers tend to use the monetary tools with a short sight perspective, using the inflation tax to smooth different kind of macroeconomic shocks – i.e. real (Barro and Gordon, 1983) and fiscal (Sargent and Wallace, 1981) unbalances - trying to exploit the trade-off between real gains and nominal (inflationary) costs. The inflation tax finances the stabilization policies. But the more the markets are efficient the greater the risk that the short sighted monetary policies produces just inflation. In fact the rational private agents fully anticipate the political incentives to use the inflation tax, fully adjusting the nominal variables. In this framework the Friedman–Lucas proposition on monetary policy neutrality holds. Furthermore, the political inflation bias can dynamically generate greater uncertainty and negative externalities (such as moral hazard risks). The inflation tax is inefficiently used in a systematic way, becoming tendentially high and volatile and then producing only macroeconomic distortions. The inefficient use of inflation tax was empirically confirmed by the

fact that the optimal taxation theory did not find any support in the data. The optimal taxation theory claims that the benevolent policymaker chooses the rate of any taxation – including the inflation tax – to minimize the present value of the social cost; consequently inflation and tax rates have a positive relationship. If the optimal taxation theory empirically fails it is natural to conclude that the government is not benevolent, being affected by inflation biases.

Therefore, banning the use of the monetary policy for inflation tax purposes becomes the social goal. The institutional setting gains momentum; the relationships (governance) between the policymaker – who designs the overall economic policy - and the central bank -which is responsible for the monetary policy – become crucial in avoiding the inflation bias. The more the markets are rational the more the rules of the game between policymakers and central bankers gain momentum (Barro and Gordon, 1983; Backus and Driffill, 1985; Rogoff, 1985; Lohmann, 1992).

The optimal central bank governance has to be essentially a medal with two sides. On the one side, the central banker has to be independent, i.e. the central bank enjoys the ability to implement the non-inflationary monetary policy without any external (political) short sighted interference. The central banker becomes a veto player against inflationary monetary policies. On the other side, the central banker has to be conservative, where conservativeness refers to the importance that he/she assigns to price stability in its relation to other macroeconomic objectives. The conservativeness is the necessary step to avoid that the central banker himself/herself becomes a source of the inflation bias. Independence and conservativeness become the conditions to implement credible non-inflationary monetary policies. The trade-off between conservativeness and independence (Eijffinger and Hoeberichts, 1998) can be addressed using Independence as a tool to implement conservative monetary policies. But the private agents trusts the central banker only if effective rules on accountability and transparency hold. In other words a conservative central banker is credible if he/she works in an institutional setting which guarantees independence and accountability, acting in a transparent way and implementing an effective communication policy.

The relationship between independence and accountability represents the core of the so-called central bank governance. The central bank governance became the institutional setting for implementing the day by day monetary policy: given the long run goal to avoid the risk of inflation, the modern central banker can also smooth the real business cycles (Bernanke and Gertler, 1995; Clarida, Gali and Gertler, 1999; Woodford, 2003), using monetary policy rules (Taylor, 1993; Henderson and McKibbin 1993; Walsh, 1995).

Monetary policy becomes the final outcome of a complex interaction between three main components: monetary institutions, central banker preferences and policy rules (Persson and Tabellini, 1993; Svensson, 1995). In this respect the huge literature on central bank governance can be described as a two stage process. Initially, the scholars involved in the field went on to verify the theoretical conjectures with comparative, institutional and empirical analysis. After constructing indices of central bank governance (Grilli, Masciandaro and Tabellini, 1991; Cukierman, Webb and Neyapti, 1992; Alesina and Summers, 1993), it has been attempted to determine whether and how the different indices could be considered as drivers in explaining the most important macroeconomic phenomena: inflation, public debt and interest rates, income and growth.

Taking advantage from the first wave of studies on the monetary regimes - including the critical views (McCallum, 1995) – the literature did an important step forward considering the central bank governance as an endogenous (dependent) variable that has to be explained (Posen, 1995). Which are the drivers that can motivate the decision of one or more countries to maintain or reform their monetary regimes? Why and how are the policymakers forced to implement

monetary reforms that reduce their powers in using the inflation tax, changing the rules governing the central bank settings? So far various interpretative hypotheses were advanced to explain the genesis of the political process that leads a monetary regime to assume given characteristics. Developments in endogenizing the central bank governance and thereby its effectiveness has been the subject of analysis in both economics and political science. All the hypotheses stress the importance of studying the role of the preferences of both the citizens and the governments in determining the central bank governance features. Furthermore, it is worth noting that the different views can be intertwined in studying under which economic, institutional and cultural conditions reforms of the central bank governance do take place or not. It is also evident that these studies acquire greater importance in periods – as the present period after the Financial Crisis - when there is a tendency to reform, or at least to question, the design of the central bank governance.

3 Central bank accountability, transparency and communication

During the 1970s and 1980s, central banks were very much shrouded in monetary mystique and secrecy (Goodfriend, 1986). The theoretical rationale for the lack of central bank transparency and communication was given by the theory of ambiguity, credibility and inflation under discretion and asymmetric information developed in the seminal article of Cukierman and Meltzer (1986). Transparency of central bank decision-making has increased rapidly from the early 1990s beginning with the adoption of inflation targeting by the Bank of England, Bank of Canada, Reserve Bank of New Zealand and the Swedish Riksbank. Although the Federal Reserve System was officially not conducting inflation targeting, in practice it gradually shifted more or less as to inflation targeting. The European Central Bank adopted from its beginning a so-called two-pillar strategy with a monetary pillar focusing on monetary aggregates like M3, which it inherited from the Deutsche Bundesbank, and an economic pillar taking account of the drivers of inflationary expectations. Nowadays, most central banks put a much larger weight on their communication with the public nowadays than they used to do. An important trigger for increased transparency has been the requirement for greater accountability of independent central banks. As central banks have become more independent over time, they have to pay closer attention to explaining what they do and what underlies their decisions (Briault, Haldane and King, 1996). More transparency and increased use of communication is partly a logical consequence of this development.

Even though central bank accountability justifies this trend towards more transparency, it is less obvious that more central bank transparency is also beneficial from an economic point of view. Therefore, many theoretical studies try to analyse whether the trend towards transparency could be justified from an economic point of view as well. These studies vary not only with respect to the different aspects of central bank transparency, such as political, economic, procedural, policy and operational transparency, but also regarding the structure of the economy determining the monetary transmission mechanism (Issing, 2005). Besides this theoretical research on the economic effects of more central bank transparency, more recently empirical studies also address various questions using recently developed indices of central bank transparency. The objective of this introduction is not to give a comprehensive overview of the literature on the economic effects of more central bank transparency. The transparency literature can be distinguished within five different categories: political, economic, procedural, policy, and operational transparency. Building on these five categories, the first comprehensive index for central bank transparency was constructed for the central banks of Australia, Canada, Eurozone, Japan, New Zealand, Sweden, Switzerland, the United Kingdom and the United States (Eijffinger and Geraats, 2006).

Nowadays the ability of central banks to affect the economy critically depends upon their ability to influence market expectations regarding the *future path* of overnight interest rates, and not merely their current level. Therefore, the public understanding of current and future policy is critical for the effectiveness of policy. In other words, monetary policy is increasingly becoming the art of managing expectations. As a result, communication has developed into a key instrument in the central bankers' toolbox in recent years. Virtually all central banks in advanced economies have taken major steps in using communication as a key instrument in monetary policy-making. For example, many central banks, including the Bank of England and the Federal Reserve System, publish minutes and voting records, while the European Central Bank explains its monetary policy decisions at the day of the meeting of its decision-making body at a press conference.

The increased importance of communication for policy makers is mirrored by the rapid development of the academic literature on this topic. Researchers have highlighted two reasons why communication may prove useful for central banks. First and foremost, communication may be a very direct and effective tool to influence expectations. Therefore, it plays a seminal role in improving the effectiveness of monetary policy and, consequently, the economy's overall performance (Blinder, Ehrmann, Fratzscher, De Haan and Jansen, 2008).

Second, communication may be used to reduce noise in financial markets. More transparency over policy may lead to greater predictability of central bank actions, which, in turn, reduces the uncertainty in financial markets. The ability of policy makers to move asset prices and the predictability of policy decisions are not independent of each other as communication that leads to high predictability of decisions may also have a significant effect on financial markets.

However, it is by no means clear what constitutes an optimal communication strategy, as it is not straightforward that providing more information is always preferable. Any communication strategy of a central bank is faced with a potential conflict as the literature on transparency has shown that a maximum level of information need not be optimal for the efficiency with which it is able to pursue its mandate.

Indeed, from a theoretical perspective it is not obvious that communication may help the central bank realizing its ultimate objective(s), like price stability and stable economic growth. Communication has little value added if the central bank credibly commits to a policy rule. Assuming that the public has rational expectations, any systematic pattern in the way that policy is conducted should be correctly inferred from the central bank's observed behaviour. Thus, when it comes to predicting future interest rates, it suffices to interpret (forecasts of) economic data in view of the central bank's policy rule; there is no need for central bank communication. We define central bank transparency as how easily the public can deduce central bank goals and intentions from 'observables'. One might say that a central bank can be fully transparent without any communication.

This stylized example makes clear that there are, essentially, three reasons why central bank transparency and communication may matter: non-rational expectations, asymmetric information, and absence of policy rules and credibility. If one or more of these conditions hold, central bank communication may have an impact on financial markets (see also: De Haan, Eijffinger and Rybinski, 2007).

First, the assumption that the public will understand monetary policy perfectly regardless of the efforts that are made to explain it may be unrealistic. King (2005) poses that the public may follow simple (but possibly fairly robust) 'heuristics' in making decisions instead of following optimising behaviour. He argues that in this case central-bank communication can play an important role in leading people to choose heuristics of the right sort: "the more the central bank can do to behave in a way that makes it easy for the private sector to adopt a simple heuristic to guide expectations the better. A good heuristic from that point of view would be 'expect inflation to be equal to

target' (King, 2005, p. 12). In other words, by communicating to the public the central bank may help anchoring expectations. Bernanke (2004) refers to the recent literature on adaptive learning in explaining why communication on these issues affects monetary policy effectiveness. When the public does not know but instead must estimate the central bank's reaction function, there is no guarantee that the economy will converge to the optimal rational expectations equilibrium because the public's learning process *itself* affects the behaviour of the economy. The feedback effect of learning on the economy can lead to unstable or indeterminate outcomes. In such a setting, communication by the central bank may play a key role in helping improve economic performance.

Second, financial-market participants generally do *not* have as much information as monetary policymakers do about a number of key inputs to policymaking, including the policymakers' objectives, their assessment of the economic situation, and their policy strategy. If there is asymmetric information, i.e. if the public and the central bank dispose of different information, it is perfectly rational for the public to adjust its expectations. The central bank may, for instance, provide information about its reaction function. This should lead, *ceteris paribus*, to an increase in the private sector's ability to forecast the central bank's policy instrument. One possibility in countries without explicit inflation targets is that central bank may provide information about the long-run inflation target of the central bank. Likewise, central banks could also provide information on the relative weights that the central bank places on its output and inflation objectives. Furthermore, the central bank may have better information on the economic outlook. Kohn and Sack (2004) argue that private agents may lend special credence to the economic pronouncements of central bank, particularly if the central bank has established credibility as an effective forecaster of the economy. However, even if the central bank has private information an important issue that remains to be settled is under which circumstances release of this information may be beneficial, i.e. contributes to realizing the objective(s) of the central bank.

Finally, most central banks do not follow a fixed rule. For example, Bernanke (2004) poses that "specifying a complete and explicit policy rule, from which the central bank would never deviate under any circumstances, is impractical. The problem is that the number of contingencies to which policy might respond is effectively infinite (and, indeed, many are unforeseeable)." Likewise, president Draghi of the European Central Bank has repeatedly stressed the importance of 'forward guidance' and has announced that the European Central Bank is considering, like the Federal Reserve System and the Bank of England, the publication of the minutes of meetings in the near future. By commenting on recent or expected economic developments or by giving hints, the central bank may influence financial markets' expectations (see also: Siklos and Strurm, 2013).

4 Conclusion

At the end of our story monetary policy and central banking become two sides of the same coin: the modern central banker was essentially a monetary policy agent, primarily focused on monetary stability goals, which can be pursued by maneuvering interest rates. The mainstream of modern central banking can be briefly summarized using the principal-agent terminology. The citizens, who represent the principal, realized that on average the politicians in charge tend to use monetary policy tools to obtain short term macroeconomic goals. The reason is that the politicians are naturally shortsighted agents, given that they try to maximize their probability to be and/or to remain in office. Therefore, politicians tend to use monetization to address urgent problems in terms of unemployment, fiscal unbalances, and recently banking bail-outs. But the more the markets are rational and efficient, the more it is likely that monetization policies simply produce more inflation and uncertainty, without any real gains. The citizens realize the politicians' biases in

using monetary policy powers and find it optimal to change the rules of the game: the monetary policy has to be delegated to an unelected bureaucracy being the central bank, where the bureaucrats in office are designed as career-concerned agents, i.e. they know that their success depends on how they fulfill the goal of their institution.

Consequently for monetary policy effectiveness, it is crucial that the mission of the central bank is well defined and established using three criteria. First of all, the main goal of the central bank has to provide monetary stability in order to avoid the employment bias, i.e. the temptation to use monetary tools to elude labor market inefficiency problems. Secondly, the central bank cannot finance public deficits and debt in order to avoid the fiscal bias, i.e., the temptation of fiscal monetization. Thirdly and more recently, central bank involvement in financial regulation and supervision has to be minimized in order to avoid the banking bias, i.e., the temptation of bank bail-out by the use of monetization (for the last issues, see: Eijffinger and Masciandaro, 2011 and Masciandaro and Passarelli, 2014).

Furthermore, the mission of the central bank has to be protected from risks of political capture, defining its independence from executive power, its accountability with respect to legislative power, as well as procedures for its transparency and policies for communication. The relevance of the central bank governance has been definitely settled in the last decades. However, the optimal central bank governance has still not been established fully according to our perspective.

The governance of central banks has become the benchmark to evaluate the effectiveness of the monetary institutions, supported by empirical analyses which stressed the association between central bank independence and inflation performance. That was the situation before the Financial Crisis. But now, after the Financial Crisis, the scenario is changing. The desire to avoid new cases of systemic banking instability and at the same time to address the deep economic crisis has focused new attention on the architecture of the central bank regimes. Policymakers in all countries have wondered and are still wondering whether to reshape their central bank settings. New proposals to reform these systems have been enacted or are under discussion, at least in Europe and in the United States. In both cases the common trend seems to be an increasing involvement of the central banks in financial regulation and supervision, also taking into account the new distinction between macro and micro prudential supervision. It is evident that the central banking pillars of the monetary action must be reconsidered. But how should that been done? Is it possible to maintain the benefits of the mainstream of central banking maintaining monetary stability and also taking into account at the same time the importance of financial stability? Consequently, is it possible to reintroduce banking responsibilities into the central bank domain in a way consistent with the present institutional setting, i.e. without introducing risks of political capture and/or banking capture? On these questions our final overall suggestion is that reconsidering the central banking benchmark implies a relevant risk assumption, which so far has been underestimated. How to hedge this risk is a fundamental issue that must be considered to understand not only what will be the economics of the “post-modern” monetary policy, but also which political economy drivers are motivating the demand and supply of reform of the central bank governance. We hope that the readers of this note will find guidance in the selected articles - which we collected in Eijffinger and Masciandaro 2014 - which we consider to be classical and essential reading for understanding these problems.

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